Standard Reference Test Tire," at a speed of 64.4 km/h (40.0 mph), without water delivery (incorporated by reference: see 49 CFR 571.5).

S6.2.2. Gradient. The test surface has not more than a 1 percent gradient in the direction of testing and not more than a 2 percent gradient perpendicular to the direction of testing.

S6.2.3. Lane width. The lane width is not less than 3.5 m (11.5 ft).

S6.3. Vehicle conditions.

S6.3.1. The test weight for maximum speed is unloaded vehicle weight plus a mass of 78 kg (170 pounds), including driver and instrumentation.

S6.3.2. No adjustment, repair or replacement of any component is allowed after the start of the first performance

S6.3.3. Tire inflation pressure. Cold inflation pressure is not more than the maximum permissible pressure molded on the tire sidewall.

S6.3.4. Break-in. The vehicle comthe manufacturer's pletes ommended break-in agenda as a minimum condition prior to beginning the performance tests.

S6.3.5. Vehicle openings. All vehicle openings (doors, windows, hood, trunk, convertible top, cargo doors, etc.) are closed except as required for instrumentation purposes.

S6.3.6. Battery powered vehicles. Prior to beginning the performance tests, propulsion batteries are at the state of charge recommended by the manufacturer or, if the manufacturer has made no recommendation, at a state of charge of not less than 95 percent. No further charging of any propulsion battery is permissible.

S7. Test procedure. Each vehicle must meet the performance limit specified in S5(a) under the following test procedure. The maximum speed performance is determined by measuring the maximum attainable vehicle speed at any point in a distance of 1.6 km (1.0 mile) from a standing start and repeated in the opposite direction within 30 min-

[63 FR 33216, June 17, 1998, as amended at 68 FR 43972, July 25, 2003]

## PART 572—ANTHROPOMORPHIC **TEST DEVICES**

#### Subpart A—General

- 572.1Scope. 572.2 Purpose.
- Application. 572.3
- 572.4 Terminology

## Subpart B-50th Percentile Male

- 572.5 General description.
- 572.6 Head. Neck.
- 572.7572.8
- Thorax.
- 572.9 Lumbar spine, abdomen, and pelvis.
- 572.10 Limbs.
- 572.11 Test conditions and instrumentation.

#### Subpart C—3-Year-Old Child

- 572.15 General description.
- 572.16 Head.
- 572.17 Neck.
- 572.18 Thorax.
- 572.19 Lumbar spine, abdomen and pelvis.
- 572.20 Limbs.
- 572.21 Test conditions and instrumentation.

### Subpart D-6-Month-Old Infant

572.25 General description.

#### Subpart E—Hybrid III Test Dummy

- 572.30 Incorporated materials.
- General description. Head.
- 572.32 572.33 Neck.
- 572.34 Thorax.
- 572.35Limbs.
- 572.36 Test conditions and instrumentation.

## Subpart F—Side Impact Dummy 50th Percentile Male

- 572.40 Incorporated materials.
- General description.
- Thorax.
- 572.43 Lumbar spine and pelvis.
- 572.44 Instrumentation and test conditions.
- APPENDIX A TO SUBPART F

## Subparts G-H [Reserved]

## Subpart I-6-Year-Old Child

- 572.70 Incorporation by reference.
- General description. 572.71
- Head assembly and test procedure. 572.72 572.73 Neck assembly and test procedure.
- 572.74 Thorax assembly and test procedure.
- 572.75 Lumbar spine, abdomen, and pelvis
- assembly and test procedure.
- 572.76 Limbs assembly and test procedure.

#### Pt. 572

572.77 Instrumentation.

572.78 Performance test conditions.

FIGURES TO SUBPART I

#### Subpart J-9-Month Old Child

572.80 Incorporated materials.

572.81 General description.

572.82 Head.

572.83 Head-neck

572.84 Thorax.

572.85 Lumbar spine flexure.

572.86 Test conditions and dummy adjustment.

#### Subpart K—Newborn Infant

572.90 Incorporation by reference.

572.91 General description.

#### Subpart L-Free Motion Headform

572.100 Incorporation by reference.

572.101 General description.

572.102 Drop test.

572.103 Test conditions and instrumentation.

# Subpart M—Side Impact Hybrid Dummy 50th Percentile Male.

572.110 Materials incorporated by reference.

572.111 General description.

572.112 Head assembly.

572.113 Neck assembly

572.114 Thorax.

572.115 Lumbar spine and pelvis.

572.116 Instrumentation and test conditions.

## Subpart N—Six-year-old Child Test Dummy, Beta Version

572.120 Incorporation by reference.

572.121 General description.

572.122 Head assembly and test procedure.

572.123 Neck assembly and test procedure.

572.124 Thorax assembly and test procedure. 572.125 Upper and lower torso assemblies

and torso flexion test procedure.

 $572.126\,$  Knees and knee impact test procedure.

 $572.127\ \mathrm{Test}$  conditions and instrumentation.

FIGURES TO SUBPART N

## Subpart O—Hybrid III 5th Percentile Female Test Dummy, Alpha Version

572.130 Incorporation by reference.

572.131 General description.

572.132 Head assembly and test procedure. 572.133 Neck assembly and test procedure.

572.134 Thorax assembly and test procedure.

572.135 Upper and lower torso assemblies and torso flexion test procedure.

572.136 Knees and knee impact test procedure.

## 49 CFR Ch. V (10-1-06 Edition)

572.137 Test conditions and instrumentation.

FIGURES TO SUBPART O

## Subpart P—Hybrid III 3-Year-Old Child Crash Test Dummy, Alpha Version

572.140 Incorporation by reference.

572.141 General description.

572.142 Head assembly and test procedure.

572.143 Neck-headform assembly and test procedure.

572.144 Thorax assembly and test procedure.

572.145 Upper and lower torso assemblies and torso flexion test procedure.

572.146 Test condition and instrumentation.

FIGURES TO SUBPART P

## Subpart R—CRABI 12-Month-Old Infant Crash Test Dummy, Alpha Version

572.150 Incorporation by reference.

572.151 General description.

572.152 Head assembly and test procedure.

572.153 Neck-headform assembly and test procedure.

572.154 Thorax assembly and test procedure.

572.155 Test condition and instrumentation.

FIGURES TO SUBPART R

## Subpart S—Hybrid III Six-Year-Old Weighted Child Test Dummy

572.160 Incorporation by reference.

572.161 General description.

572.162 Head assembly and test procedure.

572.163 Neck assembly and test procedure.

572.164 Thorax assembly and test procedure. 572.165 Upper and lower torso assemblies and torso flexion test procedure.

572.166 Knees and knee impact test procedure.

572.167 Test conditions and instrumentation.

FIGURES TO SUBPART S

# Subpart T [Reserved]

## Subpart U— ES–2re Side Impact Crash Test Dummy, 50th Percentile Adult Male

572.180 Incorporated materials.

572.181 General description.

572.182 Head assembly.

572.183 Neck assembly. 572.184 Shoulder assembly.

572.185 Thorax (upper torso) assembly.

572.186 Abdomen assembly.

572.187 Lumbar spine.

572.188 Pelvis.

572.189 Instrumentation and test conditions.

APPENDIX A TO SUBPART U OF PART 572—FIG-URES

## Subpart V, SID-IIsD Side Impact Crash Test Dummy, Small Adult Female

- 572.190 Incorporated materials.
- 572.191 General description.
- 572.192 Head assembly.
- 572.193 Neck assembly.
- 572.194 Shoulder.
- 572.195 Thorax with arm.
- 572.196 Thorax without arm.
- 572.197 Abdomen.
- 572.198 Pelvis acetabulum.
- 572.199 Pelvis iliac.
- 572.200 Instrumentation and test conditions.
- APPENDIX A TO SUBPART V OF PART 572—FIGURES

AUTHORITY: 49 U.S.C. 322, 30111, 30115, 30117 and 30166; delegation of authority at 49 CFR 1.50.

EDITORIAL NOTES: 1. For compliance provisions relating to a vehicle's conformance with the performance requirements of Standard No. 208 (§571.208) relating to the part 572 test dummy, see the "Effective Date Note" at subpart E of this part.

2. Nomenclature changes to part 572 appear at 69 FR 18803, Apr. 9, 2004.

## Subpart A—General

# § 572.1 Scope.

This part describes the anthropomorphic test devices that are to be used for compliance testing of motor vehicles and motor vehicle equipment with motor vehicle safety standards.

[60 FR 43058, Aug. 18, 1995]

## § 572.2 Purpose.

The design and performance criteria specified in this part are intended to describe measuring tools with sufficient precision to give repetitive and correlative results under similar test conditions and to reflect adequately the protective performance of a vehicle or item of motor vehicle equipment with respect to human occupants.

[38 FR 20451, Aug. 1, 1973, as amended at 42 FR 7151, Feb. 7, 1977]

## § 572.3 Application.

This part does not in itself impose duties or liabilities on any person. It is a description of tools that measure the performance of occupant protection systems required by the safety standards that incorporate it. It is designed to be referenced by, and become a part

of, the test procedures specified in motor vehicle safety standards such as Standard No. 208, Occupant Crash Protection.

[38 FR 20451, Aug. 1, 1973, as amended at 42 FR 7152, Feb. 7, 1977]

#### § 572.4 Terminology.

- (a) The term *dummy*, when used in this subpart A, refers to any test device described by this part. The term *dummy*, when used in any other subpart of this part, refers to the particular dummy described in that part.
- (b) Terms describing parts of the dummy, such as *head*, are the same as names for corresponding parts of the human body.
- (c) The term *unimodal*, when used in subparts C and I, refers to an acceleration-time curve which has only one prominent peak.

[38 FR 20451, Aug. 1, 1973, as amended at 42 FR 7152, Feb. 7, 1977; 44 FR 76530, Dec. 27, 1979; 56 FR 57836, Nov. 14, 1991]

# Subpart B-50th Percentile Male

### § 572.5 General description.

(a) The dummy consists of the component assemblies specified in Figure 1, which are described in their entirety by means of approximately 250 drawings and specifications that are grouped by component assemblies under the following nine headings:

- SA 150 M070—Right arm assembly
- SA 150 M071—Left arm assembly
- SA 150 M050—Lumbar spine assembly
- SA 150 M060—Pelvis and abdomen assembly
- SA 150 M000—Right leg assembly
- SA 150 M081—Left leg assembly
- SA 150 M010—Head assembly
- SA 150 M020—Neck assembly
- SA 150 M030—Shoulder-thorax assembly.

(b) The drawings and specifications referred to in this regulation that are not set forth in full are hereby incorporated in this part by reference. These materials are thereby made part of this regulation. The Director of the Federal Register has approved the materials incorporated by reference. For materials subject to change, only the specific version approved by the Director of the Federal Register and specified in the regulation are incorporated. A notice of any change will be published in the